

ring nodes:
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 25 26 27 28 29 30 chain bonds:
16-25
ring bonds:
1-2 1-5 2-3 2-10 3-4 3-13 3-14 4-5 4-6 5-9 6-7 6-17 7-8 8-9 10-11
11-12 12-13 14-15 15-16 16-17 25-26 25-30 26-27 27-28 28-29 29-30 exact/norm bonds:
1-2 1-5 2-3 2-10 3-4 3-13 3-14 6-17 10-11 11-12 12-13 14-15 15-16
16-17 16-25
normalized bonds:
4-5 4-6 5-9 6-7 7-8 8-9 25-26 25-30 26-27 27-28 28-29 29-30 isolated ring systems:
containing 25:

Match level :

1:Atom 2:Atom 3:Atom 4:Atom 5:Atom 6:Atom 7:Atom 8:Atom 9:Atom 10:Atom 11:Atom 12:Atom 13:Atom 14:Atom 15:Atom 16:Atom 17:Atom 25:Atom 26:Atom 27:Atom 28:Atom 29:Atom 30:Atom

L1 STRUCTURE UPLOADED

=> d L1 HAS NO ANSWERS L1 STR

$$\begin{array}{c} \text{CH}_2 \\ \text{CH}_2 \\ \text{CH}_2 \\ \text{CH}_2 \\ \text{O}-2 \end{array}$$

Structure attributes must be viewed using STN Express query preparation.

=> s l1 ful

FULL SEARCH INITIATED 11:58:23 FILE 'REGISTRY'
FULL SCREEN SEARCH COMPLETED - 375 TO ITERATE

100.0% PROCESSED 375 ITERATIONS

7 ANSWERS

SEARCH TIME: 00.00.01

L2 7 SEA SSS FUL L1

=> fil caplus

COST IN U.S. DOLLARS

SINCE FILE

TOTAL

FULL ESTIMATED COST

ENTRY SESSION

161.33 161.54

FILE 'CAPLUS' ENTERED AT 11:58:27 ON 18 JUL 2005
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FILE COVERS 1907 - 18 Jul 2005 VOL 143 ISS 4 FILE LAST UPDATED: 17 Jul 2005 (20050717/ED)

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This file contains CAS Registry Numbers for easy and accurate substance identification.

=> s 12

L3 3 L2

=> d ibib abs hitstr tot

L3 ANSWER 1 OF 3 CAPLUS COPYRIGHT 2005 ACS ON STN ACCESSION NUMBER: 2005:300305 CAPLUS DOCUMENT NUMBER: 142:374012

DOCUMENT NUMBER: TITLE:

142:374012
Preparation of N-alkylgalanthamines and related compounds for the treatment of central nervous system diseases
Czollner, Laszlo; Kaelz, Beate; Welzig, Stefan; Frantsits, Werner J.; Jordis, Ulrich; Froehlich, Johannes
Sanochemia Pharmazeutika A.-G., Austria PCT Int. Appl., 70 pp.
CODEN: PIXXD2
Patent
German
2 INVENTOR (S):

PATENT ASSIGNEE(S): SOURCE:

DOCUMENT TYPE: LANGUAGE: FAMILY ACC. NUM. COUNT: PATENT INFORMATION:

PA'	PATENT NO.						DATE			APPL	ICAT	ION	NO.		DATE		
						-									-		
WO						A2 20050407				WO 2		20040909					
WO	WO 2005030333				A3 20050623												
	W:	ΑE,	AG,	AL,	AM,	ΑT,	AU,	AZ,	BA,	BB,	BG,	BR,	BW,	BY,	BZ,	CA,	CH,
		CN,	co,	CR,	CU,	CZ,	DE,	DK,	DM,	DZ,	EC,	EE,	EG,	ES,	FI,	GB,	GD,
		GE,	GH,	GM,	НŔ,	ΗU,	ID,	IL,	IN,	IS,	JP,	KE,	ΚG,	KP,	KR,	KZ,.	LC,
		LK,	LR,	LS,	LT,	LU,	LV,	ΜA,	MD,	MG,	MK,	MN,	MW,	ΜX,	MZ,	NA,	NI,
		NO,	ΝZ,	OM,	PG,	PH,	PL,	PT,	RO,	RU,	SC,	SD,	SE,	SG,	SK,	SL,	SY,
		TJ,	TM,	TN,	TR,	TT,	TZ,	UA,	UG,	US,	UΖ,	VC,	٧N,	YU,	ZА,	ZM,	ZW
	RW:	BW,	GH,	GM,	ΚE,	LS,	MW,	MZ,	NA,	SD,	SL,	SZ,	TZ,	υG,	ZM,	ZW,	AM,
		ΑZ,	BY,	KG,	ΚZ,	MD,	RU,	ΤJ,	TM,	ΑT,	BE,	BG,	CH,	CY,	CZ,	DE,	DK,
		EE,	ES,	FI,	FR,	GB,	GR,	ΗU,	ΙE,	IT,	LU,	MC,	NL,	PL,	PT,	RO,	SE,
		SI,	SK,	TR,	BF,	ΒJ,	CF,	CG,	CI,	CM,	GΑ,	GN,	GQ,	G₩,	ML,	MR,	NE,
		SN,	TD,	TG													
PRIORIT	(APP	LN.	INFO	. :						AT 2	003-	1538			A 2	0030	929

AT 2004-1174 A 20040712

Title compds. I $\{R1, R2 = H, OH; X = H, Br; Z = CH2CCH; CH2C(CH2)CH3, CO(CH2)nCl, etc.; n = 0-6\}$ and their pharmaceutically acceptable salts

L3 ANSWER 2 OF 3 CAPLUS COPYRIGHT 2005 ACS ON STN ACCESSION NUMBER: 2005:300304 CAPLUS DOCUMENT NUMBER: 142:367688

Use of galanthamine and the derivatives thereof in TITLE:

production of medicaments for the treatment of postoperative delirium Bodenteich, Angelika: Frantsits, Werner J.: Pirich, Eberhard; Czollner, Leszlo Sanochemia Pharmazeutika A.-G., Austria INVENTOR(S):

PATENT ASSIGNEE(S): SOURCE:

PCT Int. Appl., 62 pp. CODEN: PIXXD2 Patent

DOCUMENT TYPE:

FAMILY ACC. NUM. COUNT: PATENT INFORMATION:

PAT	PATENT NO.					KIND DATE			APPLICATION NO.							DATE			
WO	O 2005030332					A2 20050407			,	WO 2	004-	AT25	1		20040712				
WO	2005030332				A3 20			20050602											
	W:	ΑE,	AG,	AL,	AM,	AT,	ΑU,	AZ,	BA,	BB,	BG,	BR,	BW,	BY,	BZ,	CA,	CH,		
		CN,	co,	CR,	cu,	CZ,	DE,	DK,	DM,	DZ,	EC,	EE,	EG,	ES,	FI,	GB,	GD,		
		GE,	GH,	GM,	HR,	ΗU,	ID,	IL,	IN,	ıs,	JP,	KE,	KG,	KP,	KR,	ΚZ,	LC,		
		LK,	LR,	LS,	LT,	LU,	LV,	MA,	MD,	MG,	MK,	MN,	MW,	MX,	MZ,	NA,	NI,		
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		TJ,	TM,	TN,	TR,	TT,	TZ,	UΑ,	UG,	US,	UZ,	vc,	VN,	YU,	ZA,	ZM,	ZW		
	RW:	BW,	GH,	GM,	ΚE,	LS,	MW,	MZ,	NA,	SD,	SL,	SZ,	TZ,	UG,	ZM,	ZW,	AM,		
		ΑZ,	BY,	KG,	ΚŻ,	MD,	RU,	ΤJ,	TM,	ΑŤ,	ΒE,	BG,	CH,	CY,	CZ,	DE,	DK,		
		EE,	ES,	FI,	FR,	GB,	GR,	ΗU,	ΙE,	IT,	LU,	MC,	NL,	PL,	PT,	RO,	SE,		
		SI,	SK,	TR,	BF,	ВJ,	CF,	CG,	CI,	CM,	GΑ,	GN,	GQ,	GW,	ML,	MR,	ΝE,		
		SN,	TD,	TG															
PRIORITY	APP	LN.	INFO	. :						AT 2	003-	1538			A 2	0030	929		

OTHER SOURCE(S): MARPAT 142:367688

AB The invention discloses the use of galanthamine and the cholinergically active derivs. thereof in the production of medicaments for preventive treatment of postoperative delirium and/or subsyndronal postoperative delirium. Galanthamine, the galanthamine
derivative(4as, 6R, 8as) - 6-hydroxy-3methoxy-11-methyl-4a, 5, 9, 10-tetrahydro-6H-benzofuro[3a, 3, 2-ef]
[2] benzazepinium bromide, and analogous salts, hydrates or solvates are auited for use secording to the invention.

IT 363570-33-8 849232-80-0
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL
(Biological study); USES (Uses)
(galanthamine and galanthamine derivs. for treatment of postoperative delirium)

RN 363570-33-8 CAPLUS
CN 6H-Benzofuro[3a, 3, 2-ef][2]benzazepin-6-ol,
11-[4,6-bis (diethylamino]-1,3,5triazin-2-yl]-4a, 5,9,10,11,12-hexahydro-3-methoxy-, (4aR,68,8aR)-rel(9CI) (CA INDEX NAME)

Relative stereochemistry.

L3 ANSWER 1 OF 3 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)

were prepd. For example, 4-bromobenzyl bromide N-alkylation of

(-)-norgalanthamine, afforded alkylaglanthamine II in 701 yield. In
acetylcholinesterase inhibition assays, 60-examples of compds. I

exhibited acetylcnoinesterase infinition assays, ou-examples of compds. I co

NAME)

Absolute stereochemistry. Rotation (-).

ANSWER 2 OF 3 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)

849232-80-0 CAPLUS 6H-Benzofuro[3a,3,2-ef][2]benzazepin-6-ol, 11-[4,6-bis[3-(dimethylamino)propoxy]-1,3,5-triazin-2-yl]-(a,5,9,10,11,12-hexahydro-3-methoxy-, (4aR,65,8aR)-rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.

L3 ANSWER 3 OF 3 CAPLUS COPYRIGHT 2005 ACS on STN ACCESSION NUMBER: 2001:747793 CAPLUS DOCUMENT NUMBER: 135:304054 Frequency of galanthamine apparamaceutical

Preparation of galanthamine analogs for

use as acetyl- and butyrylcholinesterase inhibitors
Jordis, Ulrich: Froehlich, Johannes: Treu, Matthias;
Hirnschall, Manfred; Czollner, Laszlo: Kaelz, Beate;
Welzig, Stefan
Sanochemia Pharmazeutika A.-G., Austria
PCT Int. Appl., 285 pp.
CODEN: PIXXD2
Patent
German INVENTOR (S):

PATENT ASSIGNEE (S): SOURCE:

DOCUMENT TYPE: LANGUAGE: FAMILY ACC. NUM. COUNT: PATENT INFORMATION:

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	RU	224	1001									2001-						
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	НK	1045	990			A1		2005	0128		нк 2	2001- 2002- 2002-	1062	31		2	0020	823
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		•								-								
											AT 2	2001-	238		1	A 2	0010	215
											EP 2	2001-	9148	13	,	A 2	0010	322

WO 2001-AT82

W 20010322

OTHER SOURCE(S): MARPAT 135:304054

ANSWER 3 OF 3 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)

365570-33-8P 365570-34-9P 365570-35-0P

365570-36-1P

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use);
BIOL (Biological study); PREP (Preparation); USES (Uses)
(preparation of galanthamine analogs for pharmaceutical use as
acetyl- and

acetyl- and
butyrylcholinesterase inhibitors)

RN 365570-33-8 CAPLUS

CN 6H-Benzofuro[3a, 3, 2-ef][2]benzazepin-6-o1,

11-[4,6-bis(diethylamino)-1, 3, 5triazin-2-yl]-4a, 5, 9, 10, 11, 12-hexahydro-3-methoxy-, (4aR, 6S, 8aR)-rel(SCI) (CA INDEX NAME)

Relative stereochemistry.

RN 365570-34-9 CAPLUS
CN 6H-Benzofurc[3a,3,2-ef][2]benzazepin-6-ol,
11-(4,6-diphenoxy-1,3,5-triazin2-y1]-4a,5,9,10,11,12-hexahydro-3-methoxy-, (4aR,63,8aR)-rel- (9CI) (CA INDEX NAME)

L3 ANSWER 3 OF 3 CAPLUS COPYRIGHT 2005 ACS on STN

Galanthamine derivs. and analogs, such as I [R1, R2 = H, Cn, OH, SH, NO2, SO3H, PO3H, PO3H, NH2, halogen, etc.; R3 = OH, OMe; R4 = OH, alkyloxy, alknyloxy, cycloalkyloxy, aryloxy, etc.; G1, G2, G3 = CH2, (CH2)2, (CH2)3, CH(OH), etc.; W = CH2, NR5, etc.; R5 = alkyl, acyl, aryl, etc.], were prepared for therapeutic use as acetyl- and butyrylcholinesterase inhibitors. Thus, (1)-galanthamine derivative II

prepared in 80.8% yield by condensation of (\pm) -norgalanthamine with 2-chloropyrimidine using NaHCO3 in EtOH. The prepared galanthamine

derivs.
and analogs were tested for acetyl- and butyrylcholinesterase inhibiting

activity.
IT 365370-32-7P
RI: BAC (Biological activity or effector, except adverse); BSU (Biological

(Biological study, unclassified); RCT (Reactant); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses) (preparation of galanthamine analogs for pharmaceutical use as acetyl- and butyrytcholinesterase inhibitors)
RN 365570-32-7 CAPLUS
CN 6H-Benzofuro[3a,3,2-et][2]benzazepin-6-ol,
11-(4,6-dichloro-1,3,5-triazin-2-yl)-4a,5,9,10,11,12-hexahydro-3-methoxy-, (4aR,65,8aR)-rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.

L3 ANSWER 3 OF 3 CAPLUS COPYRIGHT 2005 ACS on STN

(Continued)

Relative stereochemistry.

365570-35-0 CAPLUS 6H-Benzofuro(3a,3,2-ef)[2]benzazepin-6-ol, 11-[4,6-bis(2-aminoethoxy)-1,3,5-triazin-2-yl)-4a,5,9,10,11,12-bexahydro-3-methoxy-, (4aR,68,9aR)-rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.

365570-36-1 CAPLUS
6H-Benzofuro[3a, 3, 2-ef][2]benzazepin-6-ol, 11-[4, 6-bis[2-(dimethylamino)ethoxy)-1, 3, 5-triazin-2-yl]-4a, 5, 9, 10, 11, 12-hexahydro-3-methoxy-, (4aR, 65, 8aR)-rel-(9CI) (CA INDEX NAME)

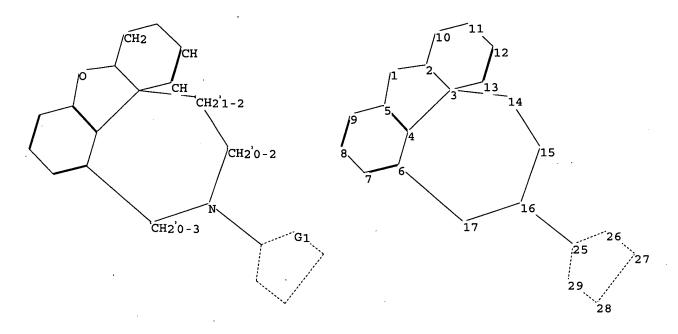
Relative stereochemistry.

L3 ANSWER 3 OF 3 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)

REFERENCE COU

THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE

FORMAT



ring nodes:
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 25 26 27 28 29 chain bonds:
16-25
ring bonds:
1-2 1-5 2-3 2-10 3-4 3-13 3-14 4-5 4-6 5-9 6-7 6-17 7-8 8-9 10-11 11-12 12-13 14-15 15-16 16-17 25-26 25-29 26-27 27-28 28-29 exact/norm bonds:
1-2 1-5 2-3 2-10 3-4 3-13 3-14 6-17 10-11 11-12 12-13 14-15 15-16 16-17 16-25 25-26 25-29 26-27 27-28 28-29 normalized bonds:
4-5 4-6 5-9 6-7 7-8 8-9 isolated ring systems: containing 25:

G1:0,S

Match level:

1:Atom 2:Atom 3:Atom 4:Atom 5:Atom 6:Atom 7:Atom 8:Atom 9:Atom 10:Atom 11:Atom 12:Atom 13:Atom 14:Atom 15:Atom 16:Atom 17:Atom 25:Atom 26:Atom 27:Atom 28:Atom 29:Atom

L4 STRUCTURE UPLOADED

=> d L4 HAS NO ANSWERS

L4 STR

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

Structure attributes must be viewed using STN Express query preparation.

=> s 14 ful FULL SEARCH INITIATED 12:04:10 FILE 'REGISTRY' FULL SCREEN SEARCH COMPLETED - 13275 TO ITERATE

100.0% PROCESSED 13275 ITERATIONS 1 ANSWERS

SEARCH TIME: 00.00.01

L5 1 SEA SSS FUL L4

=> fil caplus COST IN U.S. DOLLARS SINCE FILE TOTAL ENTRY SESSION FULL ESTIMATED COST 161.33 341.74 DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS) SINCE FILE TOTAL **ENTRY** SESSION CA SUBSCRIBER PRICE 0.00 -2.19

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FILE COVERS 1907 - 18 Jul 2005 VOL 143 ISS 4 FILE LAST UPDATED: 17 Jul 2005 (20050717/ED)

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This file contains CAS Registry Numbers for easy and accurate substance identification.

=> s 15 L6 2 L5

=> d ibib abs hitstr tot

L6 ANSWER 1 OF 2 CAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2005:300304 CAPLUS
DOCUMENT NUMBER: 142:367688
Use of galanthamine and the derivatives thereof in TITLE:

production of medicaments for the treatment of postoperative delirium Bodenteich, Angelika: Frantsita, Werner J.; Pirich, Zbethard: Czollner, Laszlo Sanochemia Pharmazeutika A.-G., Austria PCT Int. Appl., 62 pp. CODEN: PIXXD2 Patent German 2 INVENTOR (S):

PATENT ASSIGNEE(S): SOURCE:

DOCUMENT TYPE: LANGUAGE: FAMILY ACC. NUM. COUNT: PATENT INFORMATION:

PA	PATENT NO.				KIND I		DATE		i	APPLICATION NO.						DATE			
						-													
WO	O 2005030332 A2					2005			WO 2	004-	AT25	1		20040712					
WO	2005	0303	32		A3		2005	0602											
	W:	ΑE,	AG,	AL,	AM,	ΑŤ,	ΑU,	AZ,	BA,	BB,	BG,	BR,	BW.	BY,	BZ,	CA,	CH,		
		CN,	co,	CR,	Cυ,	CZ,	DE,	DK,	DM,	DZ,	EC,	EE,	EG,	ES,	FI,	GB,	GD,		
		GE,	GH,	GM,	HR,	ΗU,	ID,	IL,	IN,	ıs,	JP,	KE,	KG,	KP,	KR,	ΚZ,	LC,		
		LK,	LR,	LS,	LT,	LU,	LV,	MΑ,	MD,	MG,	MK,	MN,	MW,	MX,	MZ,	NA,	NI,		
		NO,	NZ,	OM,	PG,	PH,	PL,	PT,	RO,	RU,	sc,	SD,	SE,	SG,	SK,	SL,	SY,		
		TJ,	TM.	TN,	TR,	TT,	TZ,	UA,	UG,	US,	UZ,	VC,	VN,	YU,	ZA,	ZM,	ZW		
	RW:	BW,	GH,	GM,	KE,	LS,	MW,	MZ,	NΑ,	SD,	SL,	SZ,	TZ,	ŲG,	ZM,	ZW,	AM,		
		AZ,	BY,	KG,	KZ,	MD,	RU,	ΤJ,	TM,	AT,	BE,	BG,	CH,	CY,	CZ,	DE,	DK,		
		EE,	ES,	FI,	FR,	GB,	GR,	ΗU,	ΙE,	IT,	LU,	MC,	NL,	PL,	PT,	RO,	SE,		
		SI,	SK,	TR,	BF,	ВJ,	CF,	CG,	CI,	CM,	GΑ,	GN,	GQ,	G₩,	ML,	MR,	ΝE,		
		SN,	TD,	TG															

OTHER SOURCE(S):

MARPAT 142:367688

AB The invention discloses the use of galanthamine and the cholinergically active derivs. thereof in the production of medicaments for preventive treatment of postoperative delirium and/or subsyndronal postoperative delirium. Galanthamine, the galanthamine derivative(4as, 6R, 8as)-6-hydroxy-3methoxy-11-methyl-4a, 5, 9, 10-tetrahydro-6H-benzofuro[3a, 3, 2-ef]
[2]benzazepinium bromide, and analogous salts, hydrates or solvates are suited for use according to the invention.

IT 365570-63-4
RL: PRC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
[galanthamine and galanthamine derivs. for treatment of postoperative delirium)

RN 365570-63-4 CAPLUS
CN 6H-Benzofuro[3a, 3, 2-ef][2]benzazepin-6-01

365370-63-4 CAPLUS 6H-Benzofuro[3a,3,2-ef][2]benzazepin-6-01, 4a,5,9,10,11,12-hexahydro-3-methoxy-11-(2-thienyl)-, (4a5,6R,8a5)- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).

L6 ANSWER 2 OF 2 CAPLUS COPYRIGHT 2005 ACS on STN ACCESSION NUMBER: 2001:747793 CAPLUS DOCUMENT NUMBER: 135:304054 Preparation of galanthamine apparamaceutical Preparation of galanthamine analogs for

use as acetyl- and butyrylcholinesterase inhibitors Jordis, Ulrich; Froehlich, Johannes; Treu, Matthias; Hirnschall, Manfred; Czollner, Laszlo; Kaelz, Beate; Welzig, Stefan Sanochemia Pharmazeutika A.-G., Austria PCT Int. Appl., 285 pp. CODEN: PIXXD2 Patent INVENTOR (S):

DATE

APPLICATION NO

EP 2001-914813

WO 2001-AT82

PATENT ASSIGNEE (S): SOURCE:

KIND

DOCUMENT TYPE:

FAMILY ACC. NUM. COUNT: PATENT INFORMATION:

PATENT NO.

WO 2001074820 AT W: AE, AL, AM, AT,																	
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											, GM,						
											, LS,						
											, SD,						
		TM,	TR,	TT,	UA,	UG,	US,	UΖ,	VN,	YU	, ZA,	ZW,	AM,	ΑZ,	BY,	KG,	ΚZ,
				TJ,													
	RW:										, TZ,						
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		ВJ,	CF,	CG,							, MR,						
	2368				AA						2001-						
	1101									EΡ	2001-	9148	13		2	0010	322
EP	1101							0331									
	R:									GR	, IT,	LI,	LU,	NL,	SE,	MC,	PT,
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JP	2003 5163	5296	02		Т2			1007			2001-					0010	
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	1181				T			0730			2001-					0010	
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	2001				A			0129			2001-			/		0011	
	2003							1023			2002-					0020	
	1045				A1		2005	012B			2002-		31			0020	
PRIORITY	Y APP	LN.	INFO	- :						AT	2000-	546			A 2	0000	331
										АT	2001-	238			A 2	0010	215

OTHER SOURCE(S): MARPAT 135:304054 L6 ANSWER 1 OF 2 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)

ANSWER 2 OF 2 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)

Galanthamine derivs. and analogs, such as I [R1, R2 = H, Cn, OH, SH, NO2, SO3H, PO3H, NH2, halogen, etc.; R3 = OH, OMe; R4 = OH, alkyloxy, alkenyloxy, sclyolakyloxy, aryloxy, etc.; G1, G2, G3 = CH2, (CM2)2, (CH2)3, CH(OH), etc.; W = CH2, NR5, etc.; R5 = alkyl, acyl, aryl, etc.], were prepared for therapeutic use as acctyl- and butyrylcholinesterase inhibitors. Thus, (i)-galanthamine derivative II

prepared in 80.8% yield by condensation of (\pm) -norgalanthamine with 2-chloropyrimidine using NaHCO3 in EtOH. The prepared galanthamine

derivs.

and analogs were tested for acetyl- and butyrylcholinesterase inhibiting activity. 365570-63-4P IT

IT 365570-63-49
RL: BAC (Biological activity or effector, except adverse); BSU
(Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use);
BIOL (Biological study); PREP (Preparation); USES (Uses)
(preparation of galanthamine analogs for pharmaceutical use as acetyl- and

yı- and butyrylcholinesterase inhibitors)
365570-63-4 CAPLUS
6H-Benzofuro(3a, 3,2-ef}{2]benzazepin-6-ol, 4a,5,9,10,11,12-hexahydro-3-methoxy-11-(2-thienyl)-, (4aS,6R,8aS)- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).

REFERENCE COUNT:

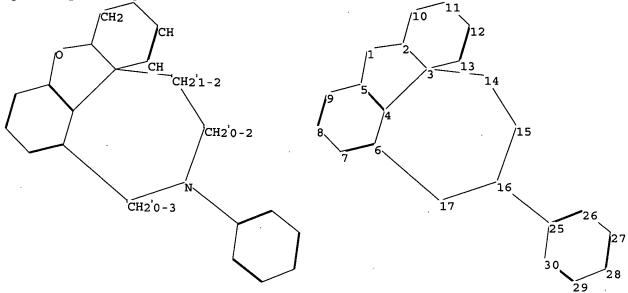
THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS

A · 20010322

W 20010322

=> =>

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ring nodes : 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 25 26 27 28 29 30 chain bonds : 16-25 ring bonds : 1-2 1-5 2-3 2-10 3-4 3-13 3-14 4-5 4-6 5-9 6-7 6-17 7-8 8-9 10-11 11-12 12-13 14-15 15-16 16-17 25-26 25-30 26-27 27-28 28-29 29-30 exact/norm bonds : 1-2 1-5 2-3 2-10 3-4 3-13 3-14 6-17 10-11 11-12 12-13 14-15 15-16 16-17 16-25 normalized bonds : 4-5 4-6 5-9 6-7 7-8 8-9 25-26 25-30 26-27 27-28 28-29 29-30 isolated ring systems : containing 25 :

Match level :

1:Atom 2:Atom 3:Atom 4:Atom 5:Atom 6:Atom 7:Atom 8:Atom 9:Atom 10:Atom 11:Atom 12:Atom 13:Atom 14:Atom 15:Atom 16:Atom 17:Atom 25:Atom 26:Atom 27:Atom 28:Atom 29:Atom 30:Atom

L7 STRUCTURE UPLOADED

=> d L7 HAS NO ANSWERS L7

STR

Structure attributes must be viewed using STN Express query preparation.

=> s 17 ful

REG1stRY INITIATED

Substance data SEARCH and crossover from CAS REGISTRY in progress... Use DISPLAY HITSTR (or FHITSTR) to directly view retrieved structures.

FULL SEARCH INITIATED 12:05:06 FILE 'REGISTRY'
FULL SCREEN SEARCH COMPLETED - 10291 TO ITERATE

100.0% PROCESSED 10291 ITERATIONS

1 ANSWERS

SEARCH TIME: 00.00.01

L8

1 SEA SSS FUL L7

L9

2 L8

L9 ANSWER 1 OF 2 CAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2005:300304 CAPLUS
DOCUMENT NUMBER: 142:367688
TITLE: Use of galanthamine and the derivatives thereof in the

production of medicaments for the treatment of postoperative delirium Bodenteich, Angelike; Frantsits, Werner J.; Pirich, Eberhard; Czoliner, Laszlo Sanochemie Pharmazeutika A.-G., Austria PCT Int. Appl., 62 pp. CODEN: PIXXD2 Patent German 2 g INVENTOR (5): PATENT ASSIGNEE(S): SOURCE:

DOCUMENT TYPE: LANGUAGE: FAMILY ACC. NUM. COUNT: PATENT INFORMATION:

PAS	PATENT NO.						KIND DATE		APPLICATION NO.							DATE		
						-									-			
WO	2005	0303	32		A2		2005	0407	1	WO 2	004-	AT25	1		20040712			
WO	WO 2005030332					A3 20050602												
	W:	ΑE,	AG,	AL,	AM,	AT,	AU,	AZ,	BA,	BB,	BG,	BR,	BW,	BY,	ΒZ,	CA,	CH,	
		CN,	co,	CR,	cυ,	CZ,	DE,	DK,	DM,	DZ,	EC,	EE,	EG,	ES,	FI,	GB,	GD,	
		GE,	GH,	GM,	HR,	ΗU,	ID,	IL,	IN,	IS,	JP,	KE,	KG,	KP,	KR,	ΚZ,	LC,	
		LK,	LR.	LS,	LT,	LU,	LV,	MA,	MD,	MG,	MK,	MN,	MW,	MX,	MZ,	NA,	NI,	
		NO,	NZ,	OM.	PG,	PH,	PL,	PT,	RO,	RU,	SC,	SD,	SE,	SG,	SK,	SL,	SY,	
		TJ.	TM,	TN.	TR,	TT,	TZ,	UA,	UG,	US,	UZ,	VC,	VN,	¥υ,	ZA,	ZM,	ZW	
	RW:	BW,	GH,	GM,	KE,	LS,	MW,	MZ,	NA,	SD,	SL,	SZ,	TZ,	UG,	ZM,	ZW,	AM,	
		AZ,	BY,	KG,	KZ,	MD,	RU,	TJ,	TM,	AT,	BE,	BG,	CH,	CY,	CZ,	DE,	DK,	
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		SN.	TD,	TG														
PRIORIT	Y APP	LN.	INFO	.:					- 4	AT 2	003-	1538			A 2	0030	929	

OTHER SOURCE(S):

MARPAT 142:367688

At 2003-1538

A 20030929

A OTHER SOURCE(S):

Absolute stereochemistry. Rotation (-).

L9 ANSWER 2 OF 2 CAPLUS COPYRIGHT 2005 ACS ON STN
ACCESSION NUMBER: 2001:747793 CAPLUS
DOCUMENT NUMBER: 135:304054
Preparation of galanthamine a

Preparation of galanthamine analogs for

use as acetyl- and butyrylcholinesterase inhibitors
Jordis, Ulrich: Froehlich, Johannes: Treu, Matthias;
Hirnschall, Manfred: Czollner, Laszlo: Kaelz, Beate;
Welzig, Stefan
Sanochemia Pharmazeutika A.-G., Austria
PCT Int. Appl., 285 pp.
CODEN: PIXXD2
Patent
German INVENTOR (S):

PATENT ASSIGNEE(S): SOURCE:

DOCUMENT TYPE:

FAMILY ACC. NUM. COUNT: PATENT INFORMATION:

									THE O								
PA	TENT	NO.			KIN	D	DATE			API	LICAT	PON_	Т. ОИ	U	D	ATE	
WO	2001	0748	20		A1		2001	1011		WO	2001	AT82	į.		2	0010	322
	W:	AE.	AL.	AM.	AT.	AU.	AZ.	BA.	BB.	В	. BRĹ	BY,	ĆA,	CH,	CN,	CU,	CZ,
		DE.	DK.	EE.	ES.	FI.	GB,	GD,	GE,	G	i, GM⟩	HR	ΉU,	ID,	IL,	IN,	IS,
		JP.	KE.	KG.	KP.	KR,	KZ.	LC,	LK,	L	, LS,	LT,	LU,	LV,	MD,	MG,	MK,
											J, SD,						
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EP	EP 1181294						2004										
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ES	2215	885			тэ		2004	1016		ES	2001-	1914	813		2	0010	322
RU	2241	001			C2		2004	1127	•	RU	2001-	1358	39		2	0010	322
BG	1061	55			A		2002	0830		BG	2001-	TOPT	3 3		- 4	OOTI	150
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										AT	2001-	238			A 2	0010	215
										EP	2001-	9148	13		A 2	0010	322

WO 2001-AT82

OTHER SOURCE(S): MARPAT 135:304054 L9 ANSWER 1 OF 2 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)

ANSWER 2 OF 2 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)

$$\mathbb{R}^4$$
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 \mathbb{R}^1
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 \mathbb{R}^4

Galanthamine derivs. and analogs, such as I [R1, R2 = H, Cn, OH, SH, NO2, SO3H, PO3H, NH2, halogen, etc.: R3 = OH, OMe: R4 = OH, alkyloxy, alknyloxy, excloalkyloxy, aryloxy, etc.: G1, G2, G3 = CH2, (CR2)2, (CR2)3, CH(OH), etc.: W = CH2, NR5, etc.: R5 = alkyl, acyl, aryl, etc.], were prepared for therapeutic use as acetyl- and butyrylcholinesterase inhibitors. Thus, (i)-galanthamine derivative II AB

prepared in 80.8% yield by condensation of (\pm)-norgalanthamine with 2-chloropyrimidine using NaHCO3 in EtOH. The prepared galanthamine derivs.

 and analogs were tested for acetyl- and butyrylcholinesterase inhibiting activity.

IT 365570-62-3F

RL: BAC (Biological activity or effector, except adverse); BSU (Biological)

(Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses) (preparation of galanthamine analogs for pharmaceutical use as acetyl- and

yı- and butyrylcholinesterase inhibitors)
365570-62-3 CAPLUS
6H-Benzofuro[3a,3,2-ef][2]benzazepin-6-ol, 4a,5,9,10,11,12-hexahydro-3-methoxy-11-phenyl-, (4a5,6x,6a5)- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).

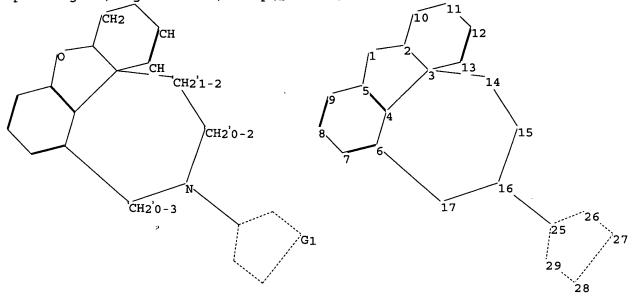
REFERENCE COUNT:

THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE 5

W 20010322

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ring nodes :

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 25 26 27 28 29

chain bonds : 16-25

10-23

ring bonds :

1-2 1-5 2-3 2-10 3-4 3-13 3-14 4-5 4-6 5-9 6-7 6-17 7-8 8-9 10-11

11-12 12-13 14-15 15-16 16-17 25-26 25-29 26-27 27-28 28-29

exact/norm bonds :

1-2 1-5 2-3 2-10 3-4 3-13 3-14 6-17 10-11 11-12 12-13 14-15 15-16

16-17 16-25 25-26 25-29 26-27 27-28 28-29

normalized bonds :

4-5 4-6 5-9 6-7 7-8 8-9

isolated ring systems :

containing 25 :

G1:0,S

Match level :

1:Atom 2:Atom 3:Atom 4:Atom 5:Atom 6:Atom 7:Atom 8:Atom 9:Atom 10:Atom

11:Atom 12:Atom 13:Atom 14:Atom 15:Atom 16:Atom 17:Atom 25:Atom 26:Atom

27:Atom 28:Atom 29:Atom

L10 STRUCTURE UPLOADED

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L10 HAS NO ANSWERS L10 STR

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

Structure attributes must be viewed using STN Express query preparation.

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REG1stRY INITIATED

Substance data SEARCH and crossover from CAS REGISTRY in progress... Use DISPLAY HITSTR (or FHITSTR) to directly view retrieved structures.

FULL SEARCH INITIATED 12:06:00 FILE 'REGISTRY' FULL SCREEN SEARCH COMPLETED - 13275 TO ITERATE

100.0% PROCESSED 13275 ITERATIONS 0 ANSWERS

SEARCH TIME: 00.00.01

L11 0 SEA SSS FUL L10

L12 0 L11

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---Logging off of STN---

Executing the logoff script...

=> LOG Y

COST IN U.S. DOLLARS	SINCE FILE	TOTAL
	ENTRY	SESSION
FULL ESTIMATED COST	0.45	685.51
DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE	TOTAL
•	ENTRY	SESSION
CA SUBSCRIBER PRICE	0.00	-5.11

STN INTERNATIONAL LOGOFF AT 12:06:38 ON 18 JUL 2005